CPC Search
CPC search Go

Map Explanations
Official Fcsts
Fcst Tools

About Us
Our Mission
Who We Are

Contact Us
CPC Information
CPC Web Team

Official 90-day Outlooks are issued once each month near mid-month at 8:30am Eastern Time. Please consult the schedule of 30 & 90-day outlooks for exact release dates.

HOME > Outlook Maps > Monthly to Seasonal Outlooks > Seasonal Outlooks

Seasonal Outlooks

OFFICIAL Forecasts

Dec-Jan-Feb 2005-06

[UPDATED MONTHLY FORECASTS SERVICE CHANGE NOTICE]
[EXPERIMENTAL TWO-CLASS SEASONAL FORECASTS]

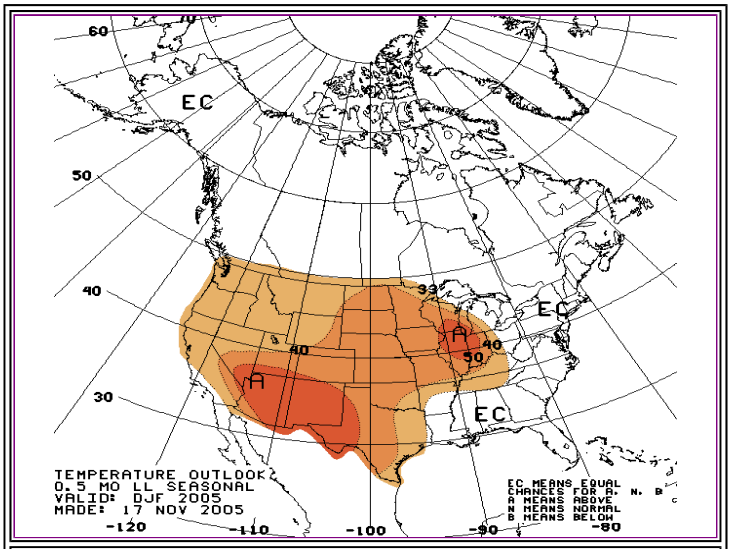
Text-Format Discussions
Monthly
Long Lead
30-& 90-Day
Hawaiian

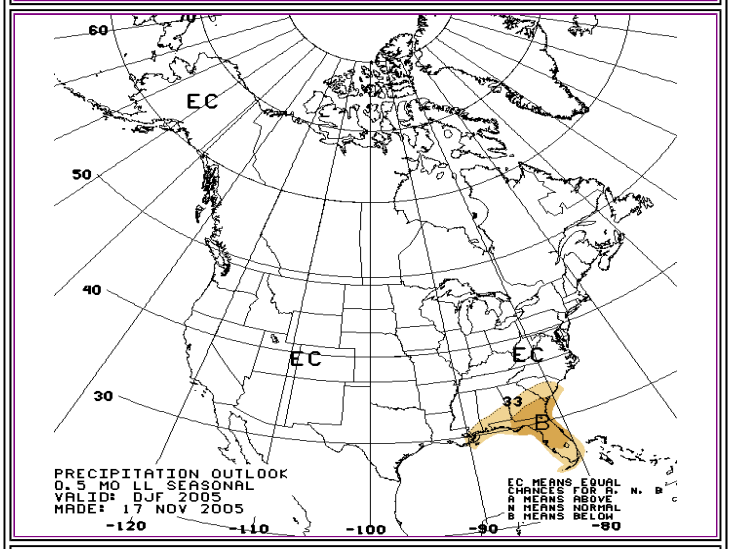
More Outlooks
0.5mn DJF 2005-06
1.5mn JFM 2006
2.5mn FMA 2006
3.5mn MAM 2006
4.5mn AMJ 2006
5.5mn MJJ 2006
6.5mn JJA 2006
7.5mn JAS 2006
8.5mn ASO 2006
9.5mn SON 2006
10.5mn OND 2006
11.5mn NDJ 2006-7
12.5mn DJF 2006-7
0.5mn Dec 2005

Climatological Values (1971-2000) for DJF

Time Series of Skill for all 0.5mn lead foreacsts

Tools Used (see Discussion for explanation)
Tools Discussion (updated as new tools are implimented)
Canonical Correlation Analysis
Optimal Climate Normals
Coupled Ocean-Atmosphere Model
Soil-Moisture Tools
Probability of Exceedence





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Our Mission
Who We Are

Contact Us
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12.5mn DJF 2006
0.5mn Dec 2005

Tools Used (see Discussion for explanation)
CCA
OCN
CMP
SMT
POE

PROGNOSTIC DISCUSSION FOR LONG-LEAD SEASONAL OUTLOOKS
NWS CLIMATE PREDICTION CENTER CAMP SPRINGS MD
830 AM EST THU NOV 17 2005

NON-TECHNICAL 0.5 MONTH LEAD FORECAST SUMMARY

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THE MAIN FACTORS WHICH USUALLY INFLUENCE SEASONAL FORECASTS INCLUDE
1) EL NINO AND LA NINA – WHICH TOGETHER MAKE UP EL NINO/SOUTHERN OSCILLATION OR ENSO –
2) TRENDS – THE DIFFERENCE BETWEEN THE MOST RECENT 10 OR 15 YEAR MEAN OF TEMPERATURE OR PRECIPITATION FOR A GIVEN LOCATION AND TIME OF YEAR AND THE 30-YEAR CLIMATOLOGY PERIOD (CURRENTLY 1971-2000) -
3) TROPICAL 30-60-DAY OSCILLATION- WHICH MAY AFFECT CLIMATE VARIABILITY WITHIN A SEASON -
4) THE NORTH ATLANTIC OSCILLATION - OR NAO - AND
5) PERSISTENTLY DRY OR WET SOILS IN THE SUMMER AND SNOW AND ICE COVER IN THE WINTER.

TROPICAL INFLUENCES – INCLUDING ENSO AND TROPICAL 30-60-DAY OSCILLATIONS ARE CURRENTLY NEUTRAL OR WEAK AND ARE EXPECTED TO HAVE LITTLE OR NO IMPACT ON THE CLIMATE IN THE NEAR-TERM. TRENDS ARE USED IN THIS FORECAST AND THEIR IMPACTS ARE ESPECIALLY LARGE IN FORECAST LEADS BEYOND 0.5 MONTHS. THE IMPACT OF THE NAO THIS WINTER IS UNCERTAIN FOR AT LEAST TWO REASONS. FIRST- THE NAO IS CURRENTLY NEAR ITS NEUTRAL PHASE. ALSO – WE ARE CURRENTLY ABLE TO PREDICT ONLY A SMALL FRACTION OF THE CLIMATE VARIABILITY ASSOCIATED WITH THE NAO. RESEARCH IS BEING CONDUCTED WITH THE AIM OF IMPROVING THE USE FOR PREDICTION OF ALL OF THESE FACTORS.

THE TEMPERATURE OUTLOOK FOR DECEMBER-JANUARY-FEBRUARY (DJF) 2005-06 CALLS FOR WARMER-THAN-NORMAL TEMPERATURES FOR ACROSS MUCH OF THE CENTRAL AND WESTERN UNITED STATES - THE GREAT PLAINS AND MIDWEST. FLORIDA AND THE OTHER GULF COAST STATES - THE SOUTHERN CALIFORNIA COAST - THE EAST COAST - ALASKA AND HAWAII HAVE EQUAL CHANCES OF WARMER-THAN... COOLER-THAN OR NEAR-NORMAL TEMPERATURES THIS DJF.

THE PRECIPITATION OUTLOOK FOR DJF CALLS FOR DRIER THAN NORMAL CONDITIONS OVER SECTIONS OF THE SOUTHEAST - INCLUDING FLORIDA AND WESTWARD ALONG THE GULF COAST TO JUST EAST OF NEW ORLEANS. ELSEWHERE EQUAL CHANCES FOR UNUSUALLY WET - DRY OR NORMAL CONDITIONS ARE EXPECTED.

AS WINTER APPROACHES ABOUT 25 PERCENT OF THE NATION IS IN SOME LEVEL OF DROUGHT. FOR THE SIXTH YEAR IN A ROW - DROUGHT REMAINS A CONCERN FOR PARTS OF THE NORTHWEST AND NORTHERN ROCKIES. WET OR DRY CONDITIONS DURING THE WINTER TYPICALLY HAVE A SIGNIFICANT IMPACT ON DROUGHT CONDITIONS. WINTER-SPRING SNOW PACK IS PARTICULARLY IMPORTANT IN THE WEST- AS MUCH OF THE ANNUAL WATER SUPPLY COMES FROM THE SPRINGTIME SNOW MELT. IT WOULD TAKE A NUMBER OF SIGNIFICANT WINTER SNOWSTORMS TO END THE CURRENT DROUGHT IN THE PACIFIC NORTHWEST AND NORTHERN ROCKIES. IN THE LAST MONTH - NEW AREAS OF DROUGHT HAVE APPEARED IN TEXAS - THE CENTRAL AND SOUTHERN MISSISSIPPI VALLEY - THE OHIO VALLEY AND TENNESSEE AND THE CENTRAL AND WESTERN GREAT LAKES.

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BASIS AND SUMMARY OF THE CURRENT LONG-LEAD OUTLOOK

NOTE: FOR GRAPHICAL DISPLAYS OF THE FORECAST TOOLS DISCUSSED BELOW SEE:

http://www.cpc.ncep.noaa.gov/products/predictions/90day/tools/briefing

CURRENT ATMOSPHERIC AND OCEANIC CONDITIONS

THE OCEANIC AND ATMOSPHERIC INDICATORS IN THE TROPICAL PACIFIC OCEAN CURRENTLY FAVOR A NEUTRAL ENSO CLASSIFICATION... WITH NEUTRAL ENSO CONDITIONS EXPECTED TO PREVAIL AT LEAST THROUGH THE DJF 2005-06 SEASON. SSTS ALONG THE EQUATOR IN THE EASTERN PACIFIC ARE MORE THAN .5 DEG C BELOW NORMAL FROM ABOUT 120w TO THE SOUTH AMERICAN COAST... WITH SOME REGIONS REACHING ANOMALIES OF CLOSE TO -2 C. SSTS FROM 120 W TO THE DATELINE ARE WITHIN .5 DEG C OF NORMAL WHILE SSTS ALONG THE EQUATOR WEST OF THE DATELINE AVERAGE JUST OVER .5 DEG C ABOVE NORMAL. BELOW NORMAL OCEAN TEMPERATURES IN THE EASTERN PACIFIC EXTEND FROM THE SURFACE TO OVER 150 METERS DEPTH... SO COOL SSTS IN THE EASTERN PACIFIC ARE LIKELY TO PERSIST THROUGH DJF. THE GRADIENT OF SSTS IN THE PACIFIC ALONG THE EQUATOR... BELOW NORMAL SSTS IN THE EAST AND NEAR TO ABOVE NORMAL SSTS IN THE CENTRAL AND WESTERN PACIFIC... IS EXPECTED TO HELP MAINTAIN STRONGER THAN AVERAGE LOW LEVEL EASTERLIES IN THE CENTRAL EQUATORIAL PACIFIC. MJO ACTIVITY IS CURRENTLY WEAK HAS NO PREDICTIVE VALUE FOR THE FORECAST AT THIS TIME. ATMOSPHERIC INDICATORS SUCH AS THE LOW LEVEL WINDS AND CONVECTION IN THE EQUATORIAL PACIFIC REMAIN CLOSE TO AVERAGE AND SUGGEST... TOGETHER WITH THE OCEAN STATE ... THAT NEUTRAL ENSO CONDITIONS WILL LIKELY CONTINUE DURING THE NEXT 6 TO 9 MONTHS.

SSTS REMAIN ABOVE NORMAL IN MUCH OF THE TROPICAL AND SUBTROPICAL ATLANTIC.

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PROGNOSTIC DISCUSSION OF SST FORECASTS

THE CONSENSUS OF SEVERAL MODELS USED AT CPC SHOWS SEASONAL MEAN NINO 3.4 SST ANOMALIES REMAINING VERY CLOSE TO ZERO THROUGH THE WINTER AND THE SPRING. SPREAD AMONG THE INDIVIDUAL TOOLS HAS DECREASED IN RECENT MONTHS...WITH MORE THAN 80 PERCENT OF THE FORECASTS FALLING IN THE NEUTRAL RANGE...-0.5C TO +0.5C. THUS THERE IS INCREASED CONFIDENCE THAT SSTS ACROSS THE TROPICAL PACIFIC WILL REMAIN NEAR AVERAGE THROUGH EARLY 2006.

PROGNOSTIC TOOLS USED FOR U.S. TEMPERATURE AND PRECIPITATION OUTLOOKS

THE OUTLOOK FOR DJF 2005-06 THROUGH MMJ 2006 IS BASED ON THE MULTI-MODEL ENSEMBLI FROM IRI... THE CFS... AND STATISTICAL TOOLS... INCLUDING CCA... SMLR AND OCN. INPUT FROM CDC MODELS - WHICH FAVORS WARM AND DRY CONDITIONS OVER THE WESTERN TWO-THIRDS OF THE NATION - WAS CONSULTED. ECCA WAS USED FOR DJF. OCN IS THE PRIMARY TOOL EXPLICITLY USED FROM JJA THROUGH DJF 2006-07. SINCE THE EXTREME PHASES OF ENSO ARE NOT EXPECTED TO BE PRESENT...ALL FORECASTS REFLECT INTERDECAD/ TREND MORE THAN ANY OTHER FACTOR.

A NEW FORECAST TOOL HAS BEEN DEVELOPED WHICH CONSOLIDATES THE CCA - THE OCN - SMLR AND A 15-MEMBER ENSEMBLE MEAN FROM THE CFS - USING THE KNOWN SKILL OF THE VARIOUS TOOLS TO FORM A WEIGHTED AVERAGE. THIS TOOL - CALLED CON - HELPS TO REDUCE THE UNCERTAINTY WHICH FORECASTERS CONFRONT WHEN THEY TRY TO SUBJECTIVELY COMBINE FORECAST TOOLS. CON HAS BEEN USED IN THE TEMPERATURE AND PRECIPITATION FORECASTS THIS TIME. VERIFICATION OF CON FOR FORECASTS FROM THE 1995-2005 PERIOI INDICATES THAT IT SHOULD IMPROVE TEMPERATURE FORECASTS OVER THE CONUS. PRECIPITATION FORECASTS FROM CON HAVE NOT YET BEEN VERIFIED AND IT IS - THEREFORE - USED MUCH MORE CONSERVATIVELY THAN IT IS FOR TEMPERATURE.

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PROGNOSTIC DISCUSSION OF OUTLOOKS - DJF 2005-06 TO DJF 2006-07

TEMPERATURE:

THERE IS A SIGNIFICANT CHANGE FROM LAST MONTH FOR THE DJF 2005 FORECAST. PROBABLILITIES FOR ABOVE AVERAGE TEMPERATURES ARE INCREASED IN THE AREA OF THE NORTHERN GREAT PLAINS...INCREASING THE AREAL COVERAGE FOR THE US AS A WHOLE. THE REGION OF ABOVE AVERAGE TEMPERATURES IN ALASKA HAS BEEN CHANGED TO EC DUE TO THE LACK OF ANY SKILLFUL SIGNAL IN THE TOOLS. THE INCREASE IN THE PROBABILITIES IN THE NORTHERN GREAT PLAINS IS DUE TO A REVISION IN THE CON TOOL WHICH STRENGTHENS THE INFLUENCE OF RECENT TRENDS ON THE FORECAST. ALSO CCA - WHICH MAKES A MAJOR CONTRIBUTION TO THE CON FORECAST - HAS NOT BACKED-OFF ON ITS FORECAST FOR ABOVE NORMAL TEMPERATURES FROM IT PREDICTION LAST MONTH.

THE INCREASE IN CONFIDENCE ABOUT ABNORMAL WARMTH IN THE NORTHERN GREAT PLAINS CONTINUES THROUGH JFM. NO SIGNIFICANT CHANGES WERE MADE IN FORECASTS

BEYOND FMA IN COMPARISION WITH LAST MONTH WITH THE EXCEPTION OF THE REMOVAL OF ABOVE NORMAL TEMPERATURES IN ALAKSA IN JFM AND A REDUCTION IN THE AREA OF ABOVE NORMAL THERE IN MAM.

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PRECIPITATION:

FOR DJF - A REGION OF SUB-MEDIAN PRECIPITATION IS INDICATED FOR THE SOUTHEAST AND GULF COAST BETWEEN FLORIDA AND SOUTHERN LOUISIANA - AS INDICATED MAINLY BY DYNAMICAL MODEL FORECAST TOOLS. A REGION OF ABOVE-MEDIAN PRECIPITATION FOR THE SOUTH-CENTRAL U.S. HAS BEEN DROPPED FROM BOTH THE DJF AND JFM FORECASTS - WHERE THE TOOLS GIVE CONFLICTING INDICATIONS - WITH ECCA AND THE DYNAMICAL MODELS SUPPORTING ABNORMAL DRYNESS - WHILE THE CCA AND OCN INDICATE ABNORMAL WETNESS.

ELSEWHERE - CONFLICT BETWEEN FORECAST TOOLS OR WEAK INDICATIONS LEAD TO A FORECAST OF EC (EQUAL CHANCES) FOR THE THREE POSSIBLE CATEGORIES.

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FORECASTER: E. OLENIC

GLOSSARY AND DEFINITIONS:

ANALOG (NATURAL ANALOG) - A WEATHER MAP THAT RESEMBLES ANOTHER WEATHER MAP - USUALLY FROM DIFFERENT YEARS BUT THE SAME SEASON IN THE HISTORICAL RECORD. THE CRITERION FOR SELECTING AN ANALOG IS OFTEN THE PATTERN CORRELATION BETWEEN THE MAPS. TWO MAPS WILL JUST BEGIN TO RESEMBLE EACH OTHER TO THE HUMAN EYE AT A PATTERN CORRELATION OF ABOUT 40%. TO BE USEFUL - ANALOGS NEED TO HAVE MUCH HIGHER CORRELATIONS TO THE ORIGINAL MAP THAN THAT - 80% OR MORE. ANALOGS ARE INCREASINGLY DIFFICULT TO FIND AS THE GEOGRAPHIC REGION BEING COMPARED INCREASES IN SIZE. PERFECT ANALOGS TO THE ENTIRE NORTHERN HEMISPHERE SIMPLY DO NOT EXIST - FOR PRACTICAL PURPOSES. THIS IS WHY SIMPLE ANALOG FORECAST METHODS DO NOT WORK VERY WELL.

ANNUAL CYCLE - AT MOST LOCATIONS THE CLIMATE STATE VARIABLES - T - P - SST- WIND - AND OTHERS DISPLAY A REGULAR VARIATION WHICH FOLLOWS THAT OF THE ELEVATION OF THE SUN IN THE SKY. A GRAPH OF THE 30 YEAR AVERAGE OF A VARIABLE FOR EACH DAY OF THE YEAR VERSUS DATE SHOWS A WAVE-FORM WHICH - FOR T AT DES MOINES FOR EXAMPLE - RANGES SMOOTHLY FROM LOWEST VALUES IN THE WINTER TO HIGHEST VALUES IN THE SUMMER.

ANOMALY - THE ARITHMETIC DIFFERENCE BETWEEN THE VALUE OF A VARIABLE AT A GIVEN PLACE AND TIME AND THE LONG-TERM AVERAGE (USUALLY 30 YEARS) FOR THE LOCATION AND TIME OF YEAR.

AO - ARCTIC OSCILLATION - A MEASURE OF THE DIFFERENCE IN PRESSURE (AT SEA LEVEL) OR 500-HPA HEIGHT (IN THE MIDDLE TROPOSPHERE) BETWEEN THE NORTHERN POLAR REGION AND MIDDLE LATITUDES. WHEN PRESSURES AND HEIGHTS ARE ABOVE (BELOW) NORMAL AT HIGH LATITUDES AND BELOW (ABOVE) NORMAL AT MIDDLE LATITUDES - THE AO IS DEFINED AS NEGATIVE (POSITIVE) AND IS ASSOCIATED WITH BELOW (ABOVE) NORMAL TEMPERATURES OVER MIDDLE LATITUDES - INCLUDING THE CONUS.

CA - CONSTRUCTED ANALOG - A LINEAR COMBINATION OF PAST OBSERVED ANOMALY PATTERNS SUCH THAT THE COMBINATION IS AS CLOSE AS DESIRED TO THE INITIAL STATE. A FORECAST IS OBTAINED BY PERSISTING THE WEIGHTS ASSIGNED TO EACH YEAR IN THE HISTORICAL RECORD AND LINEARLY COMBINING THE STATES FOLLOWING THE INITIAL TIME IN THE HISTORICAL YEARS.

CAS - CONSTRUCTED ANALOG SOIL MOISTURE PREDICTION TECHNIQUE.

CCA - CANONICAL CORRELATION ANALYSIS - A TECHNIQUE WHICH PREDICTS THE STATUS OF U.S. T AND P FOR SOME FUTURE TARGET SEASON USING THE MOST RECENT 4 NON-OVERLAPPING SEASONAL OBSERVATIONS OF TROPICAL PACIFIC SST - CIRCULATION AND U.S. T OR P TO CHARACTERIZE THE RECENT BEHAVIOR OF THE CLIMATE - AND PAST OBSERVATIONS TO PLACE RECENT BEHAVIOR INTO A HISTORICAL CONTEXT.

CFS - CLIMATE FORECAST SYSTEM - A FULLY-COUPLED OCEAN-ATMOSPHERE FORECAST SYSTEM WHICH USES NO ADJUSTMENTS TO OCEAN-ATMOSPHERE FLUXES IN POST-PROCESSING (A ONE-TIER SYSTEM) DEVELOPED AT THE NATIONAL CENTERS FOR

ENVIRONMENTAL PREDICTION.

CLIMATOLOGY - THE 30-YEAR AVERAGE OF A VARIABLE - LIKE TEMPERATURE - AT A GIVEN LOCATION AND TIME OF YEAR.

CON - A FORECAST TOOL WHICH COMBINES THE CCA - THE OCN - THE SMLR AND A 15-MEMBER ENSEMBLE MEAN FROM THE CFS - USING THE KNOWN SKILL OF THE VARIOUS TOOLS TO FORM A WEIGHTED AVERAGE. THIS TOOL HELPS TO REDUCE THE UNCERTAINTY WHICH FORECASTERS CONFRONT WHEN THEY TRY TO SUBJECTIVELY COMBINE FORECAST TOOLS. CON HAS BEEN USED IN THE TEMPERATURE AND PRECIPITATION FORECASTS THIS TIME. VERIFICATION OF CON FOR FORECASTS FROM THE 1995-2005 PERIOD INDICATES THAT IT IMPROVES TEMPERATURE FORECASTS OVER THE CONUS. PRECIPITATION FORECASTS FROM CON HAVE NOT YET BEEN VERIFIED AND IT IS - THEREFORE - USED MUCH MORE CONSERVATIVELY THAN IT IS FOR TEMPERATURE.

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CONUS - CONTERMINOUS UNITED STATES

DYNAMICAL MODEL - A PREDICTION METHOD WHICH USES EQUATIONS DESCRIBING THE PHYSICAL BEHAVIOR OF A SYSTEM AND A COMPREHENSIVE SET OF CURRENT OBSERVATIONS OF THE VALUES OF THE VARIABLES DESCRIBING THE CURRENT STATE OF THE SYSTEM (INITIAL CONDITIONS) TO PREDICT THE VALUES OF THOSE VARIABLES A SHORT TIME-STEP IN THE FUTURE. THOSE VALUES ARE - IN TURN - USED AS THE INITIAL CONDITIONS FOR A SUBSEQUENT PREDICTION - AND SO ON - UNTIL THE DESIRED FUTURE PREDICTION TIME IS REACHED.

EASTERLY WIND - WIND BLOWING FROM EAST TO WEST.

EC - EQUAL CHANCES - THE PROBABILITY OF THE MOST LIKELY CATEGORY CANNOT BE DETERMINED AND THE EXPECTED LIKELIHOODS OF ABOVE - NORMAL AND BELOW DO NOT DIFFER FROM THEIR CLIMATOLOGICAL ODDS OF 33 1/3% EACH. EC REPLACES CL.

ECCA - ENSEMBLE CCA. A MULTI-VARIATE STATISTICAL FORECAST BASED ON THE PAST PERFORMANCE OF THE CFS MODEL FORECAST USING THE MOST RECENT FORECAST AS THE PREDICTOR.

EL NINO - THE WARM PHASE OF THE ENSO CYCLE

ENSO - ACRONYM FOR EL NINO/SOUTHERN OSCILLATION

GCM - GENERAL CIRCULATION MODEL - A GENERIC TERM APPLIED TO GLOBAL DYNAMICAL MODELS.

ITCZ - INTERTROPICAL CONVERGENCE ZONE - A LINE WHERE THE SOUTHEASTERLY AND NORTHEASTERLY TRADE WINDS CONVERGE - CHARACTERIZED BY ENHANCED CONVECTION. IT MAY BE IN EITHER THE NORTHERN OR SOUTHERN HEMISPHERE - AND OCCASIONALLY A DOUBLE ITCZ MAY BE SEEN IN BOTH HEMISPHERES NOT FAR FROM THE EQUATOR.

LA NINA - THE COLD PHASE OF THE ENSO CYCLE

MJO - MADDEN-JULIAN OSCILLATION - ALSO CALLED TROPICAL INTRA-SEASONAL OSCILLATION - A DISTURBANCE IN TROPICAL CONVECTION - PRECIPITATION - WIND AND PRESSURE. MJO PRECIPITATION AND CLOUDINESS ARE ENHANCED ONLY IN REGIONS WHERE SSTS ARE VERY WARM - E.G. INDIAN OCEAN AND WEST PACIFIC. THE PRESSURE AND WIND DISTURBANCE ASSOCIATED WITH MJO IS OBSERVED TO MOVE FROM WEST TO EAST COMPLETELY AROUND THE GLOBAL TROPICS IN ABOUT 30 TO 60 DAYS.

NAO - NORTH ATLANTIC OSCILLATION TELECONNECTION PATTERN - WHICH MAY BE CONSIDERED AS THE ATLANTIC HALF OF THE AO. NOTE THAT THE STATUS OF THE AO/NAO AND OTHER SLOWLY VARYING CIRCULATION MODES - WHILE VERY IMPORTANT IN DETERMINING THE TEMPERATURE AND PRECIPITATION REGIMES OVER THE U.S. - ARE UNPREDICTABLE BEYOND A WEEK OR TWO AHEAD AT BEST BY CURRENT TECHNOLOGY AND ARE NOT EXPLICITLY INCLUDED IN OUR FORECAST PROCESS AS RELIABLE PREDICTORS.

NORTHERLY WIND - WIND BLOWING FROM NORTH TO SOUTH.

OCN - OPTIMAL CLIMATE NORMALS - A FORECAST BASED ON PERSISTING THE AVERAGE OF THE LAST 10 YEARS FOR TEMPERATURE AND THE LAST 15 YEARS FOR PRECIPITATION.

PNA - PACIFIC NORTH AMERICAN TELECONNECTION PATTERN.

QBO - QUASI-BIENNIAL OSCILLATION - AN OSCILLATION OF THE WIND IN THE LOWER STRATOSPHERE BETWEEN EASTERLY AND WESTERLY WHICH REVERSES ON A NEARLY-2 YEAR TIME SCALE. QBO IS ONE OF THE MOST REGULAR OSCILLATIONS KNOWN.

SMLR - SCREENING MULTIPLE LINEAR REGRESSION - A TECHNIQUE WHICH SELECTS THE BEST SET OF PREDICTORS - FITTING THEM TO THE OBSERVATIONS TO CREATE EQUATIONS WHICH CAN BE USED TO MAKE PREDICTIONS.

SOUTHERLY WIND - WIND BLOWING FROM SOUTH TO NORTH.

STATISTICAL PREDICTIONS - PREDICTIONS BASED MAINLY ON LARGE OBSERVATIONAL DATA SETS. CCA - OCN - SMLR - CAS - CA ARE EXAMPLES OF THESE.

TELECONNECTIONS - THESE GIVE THE HISTORICAL RELATIONSHIP BETWEEN A GIVEN POINT AND ALL OTHER POINTS OVER A LARGE AREA - LIKE THE NORTHERN HEMISPHERE - FOR A GIVEN TIME OF THE YEAR. THE POINTS ON THE MAP USUALLY CONSIST OF A SET OF MORE OR LESS EVENLY SPACED LOCATIONS CALLED GRID POINTS.

TREND - AT A GIVEN LOCATION AND TIME OF YEAR - THE DIFFERENCE BETWEEN THE AVERAGE OF THE MOST RECENT 10 (15) YEARS OF OBSERVATIONS OF T (P) AND THE CLIMATOLOGY.

WESTERLY WIND - WIND BLOWING FROM WEST TO EAST.

ZONAL FLOW PATTERN - OCCURS WHEN 500-HPA CONTOURS LIE IN AN EAST-WEST DIRECTION PARALLEL TO LATITUDE CIRCLES WITH NEARLY PURE WEST-TO-EAST FLOW.

FOR A DESCRIPTION OF THE STANDARD FORECAST TOOLS - THEIR SKILL - AND THE FORECAST FORMAT PLEASE SEE OUR WEB PAGE AT:
HTTP://WWW.CPC.NCEP.NOAA.GOV/PRODUCTS/PREDICTIONS/90DAY/DISC.HTML
(USE LOWER CASE LETTERS)

INFORMATION ON THE FORMULATION AND SKILL OF THE CAS FORECASTS MAY BE FOUND AT:
HTTP://WWW.CPC.NCEP.NOAA.GOV/SOILMST/FORECASTS.HTML (USE LOWER CASE LETTERS)

NOTES - THESE CLIMATE OUTLOOKS ARE INTENDED FOR USE PRIOR TO THE START OF THEIR VALID PERIODS. WITHIN ANY GIVEN VALID PERIOD OBSERVATIONS AND SHORT AND MEDIUM RANGE FORECASTS SHOULD BE CONSULTED.

THIS SET OF OUTLOOKS WILL BE SUPERSEDED BY THE ISSUANCE OF THE NEW SET NEXT MONTH ON DEC 15 2005.

1971-2000 BASE PERIOD MEANS WERE IMPLEMENTED EFFECTIVE WITH THE MAY 17 2001 FORECAST RELEASE.
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